

Environmental Assessment South Globe Wetland Restoration Emiquon National Wildlife Refuge

Chapter I Purpose and Need

1.1 Purpose: Illinois River National Wildlife and Fish Refuges plans the construction of a 604 acre wetland located on its Emiquon National Wildlife Refuge in Fulton County, Illinois. The purpose of this Environmental Assessment is to look at management alternatives for the south portion of the old Globe Levee and Drainage District.

1.1.1 Environmental Justice: Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations*, 59 Federal Register 7629 (1994), directs federal agencies to incorporate environmental justice in their decision making process. Federal agencies are directed to identify and address as appropriate, any disproportionately high and adverse environmental effects of their programs, policies and activities on minority or low income populations.

No environmental justice issues exist for any alternatives. The property is currently unoccupied and used for agricultural purposes. No minority or low income populations would be displaced or negatively affected in any other way by the proposed action or any alternative.

1.2 Need: Due to wetland habitat degradation (see Background) along the Illinois River there is a need to restore areas which provide resting, feeding, and nesting habitat for ducks, geese and other migratory birds during the spring and fall migration.

1.3 Decisions that Need to be Made: The Regional Director will use this Environmental Assessment to make two decisions. The first decision is to choose an alternative. The second decision, required by National Environmental Policy Act of 1969, will be to determine whether the selected alternative has a significant impact on the quality of the human environment.

1.4 Background: Historically, vast tracts of naturally flooded wetlands and backwater lake habitat provided resting, nesting, and feeding habitat for migrating ducks, geese and a variety of other migratory birds and resident wildlife. Foods in the form of mast, natural seeds and invertebrates were available during September through March migration. Large expanses of open water and marshes also provided a rich source of other wildlife foods.

Within the Illinois River basin, particularly in the bottomland areas, drainage, filling, and degradation by siltation and pollution have significantly compromised the quality and quantity of the wetland complex. Shallow marshes and wetland habitat have been fragmented and the natural landscape virtually eliminated.

Agricultural development and river control/navigation projects have been the major causes of wetland loss and degradation within the Illinois River floodplain. Native flora and fauna have

been drastically reduced or virtually exterminated from their historic habitats.

The South Globe Project Area was a part of the Globe Levee and Drainage District, which was formed in the 1920's. It was an active levee and drainage district until its purchase by the U. S. Fish and Wildlife Service from The Nature Conservancy who purchased it from Wilder Farms. The refuge purchased the South Globe in 2001.

Chapter II Alternatives, Including the Proposed Action

2.1 Alternatives not Considered for Detailed Analysis

None

2.2 Alternatives Carried Forward for Detailed Analysis

2.2.1 Alternative A (Proposed Action)

Under this alternative, the Service plans the construction of a 604 acre wetland located on its Emiquon National Wildlife Refuge in Fulton County, Illinois. The purpose of the wetland will be as mid-migration stopping point on the Mississippi Flyway for the intended use of migratory birds during the fall and spring migration.

If approved, the refuge will construct a berm running east and west near the center line of section 7 (see attached maps). The dike top will be at 440 M.S.L. and have a 12 foot wide top and 5 to 1 slopes. This constructed berm would start at the east levee and run to the 440 M.S.L. elevation contour line. Water on the unit will be managed at 439 M.S.L (1-3 feet deep). Dirt for berm construction will be borrowed from refuge lands north of the berm and shaped using refuge heavy equipment. A 48 inch pipe with screwgate and stoplog will also be installed in the southeast corner of the unit in the existing South Globe Levee. Rip rap will be placed around the water control structures to prevent washout. Upon completion, the dike will be seeded with warm season grasses to minimize erosion.

2.2.2 Alternative B (No Action)

Under this alternative, the refuge would continue to farm the South Globe through its Cooperative Farming Program. The cooperative farmer would harvest his share of the crop and the refuge's share would be left standing in the field for migratory bird use. No action would be taken to restore the land back to its pre-settlement condition.

2.2.3 Alternative C

Under this alternative, the refuge would not take any management action to restore prior existing habitats such as marsh or wetlands. The area would be left for natural regeneration which would consist of cottonwoods, silver maples and willows. Moist soil management would not be possible and the area would be lost as waterfowl and shorebird habitat.

Chapter III Affected Environment

3.1 Physical Characteristics

3.1.1 Location

The proposed 604 acre South Globe wetland restoration is located approximately three miles southeast of Lewistown, along the eastern edge of Fulton County, Illinois.

3.1.2 Geomorphic/Physiographic

The Illinois River is an unusually flat and straight river that was abundant with wetlands, sloughs, and backwater lakes. The large floodplain is a remnant of the former course of the Mississippi River. The last glaciation blocked the ancient Mississippi River between Rock Island and Princeton, Illinois, and forced the Mississippi to the west.

The proposed construction area is located within the Illinois River and Spoon River floodplains and is subject to seasonal flooding. Historically, this segment of the Illinois River was a vast wetlands complex composed of shallow marshes, bottomland forest, and backwater lakes. Presently much of the area has been drained, deforested, and leveed from the Illinois River and converted for intensive agricultural production.

3.1.3 Soils

There are four soil types present within the proposed wetland site (8415A)Orion Silt Loam, (8070A)Beaucoup silty clay loam, (8404A)Titus silty clay loam,(3284A) tice silty clay loam. All of these are considered hydric soils.

3.2 Biological Environment

3.2.1 Habitat/Vegetation

There are about 404 species of plants found in the vicinity of the proposed wetland site . All of the site has been drained, leveed, and cleared and, in the past, was intensively involved in agricultural production.

A list of plant species can be found in the Emiquon National Wildlife Refuge Decision Document.

3.2.2 Threatened, Endangered, and Candidate Species

There are 5 Federal and 80 State threatened and endangered species that have historically been found in the area but are not present in the project area.

A list of these threatened and endangered species can be found in the Emiquon National Wildlife

Refuge Decision Document

3.2.3 Other Wildlife Species

There are 45 species of mammals found in the vicinity of the proposed wetland .

There are about 48 species of reptiles and 19 species of amphibians found in the vicinity of the proposed wetland.

There have been approximately 243 species of birds documented in the vicinity of the proposed wetland.

A list of animal species can be found in the Emiquon National Wildlife Refuge Decision Document.

3.3 Land Use

Currently, most lands on the proposed wetland construction site are enrolled in the Refuge Cooperative Farming Program. If farming were to continue, a total acreage of 604 acres would be farmed in 2003.

3.4 Cultural/Paleontological Resources

No cultural resources are known or have been found on the proposed construction site.

3.5 Local Socio-economic Conditions

Fulton County is an economically depressed county with a limited tax base. The Service pays refuge revenue sharing to the county to make up for lost taxes. Once the Emiquon Refuge is fully restored, it should provide substantial recreation opportunities and attract tourism dollars to the county. A refuge economics study of Emiquon Refuge was done by Southern Illinois University as a part of the original decision document.

4.1 Alternative A (Proposed Action)

The primary purpose for this project in this area is to restore and manage wetlands in support of the North American Waterfowl Plan and Wetlands Priority Conservation Plan.

Wetlands are a valuable resource that contribute to our economy, food supply, water quality, flood control and a biodiversity of wildlife and plant resources.

4.1.1 Habitat Impacts

Approximately 604 acres of wetland habitat would be restored by the implementation of Alternative A. This alternative would create a more diverse mosaic of habitats.

4.1.2 Biological Impacts

The purpose of the wetland will be as a mid-migration stopping point on the Mississippi Flyway for the intended use of all migratory birds during the fall and spring migration. Spring bird use of the area will be especially high due to annual Illinois River flooding of Chautauqua National Wildlife Refuge, located across the river from Emiquon National Wildlife Refuge, making food inaccessible for migratory birds on Chautauqua Refuge. Migratory bird use days should increase due to waterfowl, shorebirds and other birds taking advantage of the food available on the return flight in the spring.

4.1.3 Listed Species

There have been no listed plants or animals identified on the proposed wetland site. Section 7 consultation with the US Fish and Wildlife Service was performed (See attachments).

4.1.4 Cultural Resources

No cultural resources are known or have been found on the proposed construction site.

4.1.5 Environmental Justice

See Section 1.1.1.

4.1.6 Cumulative Impacts

Wetland resting, feeding and nesting habitat has been significantly reduced or degraded along the Illinois River corridor. Alternative A reduces this trend and creates a 604 acres of wetland

habitat.

4.2 Alternative B (No Action)

The “no action” alternative, the refuge continues to farm the South Globe through its Cooperative Farming Program. The cooperative farmer would harvest his share of the crop and the refuge’s share would be left standing in the field for migratory bird use.

4.2.1 Habitat Impacts

If this alternative were selected, important wetland and wildlife habitat would not be restored. Migratory bird use would remain low during the fall migration and with slightly increasing numbers during the spring migration. Migratory bird hunting opportunities would also remain low.

A tremendous opportunity to restore and manage a potential high quality wetland habitat would be lost.

4.2.2 Biological Impacts

Migratory birds, especially waterfowl, would increase somewhat, especially during cold or snowy weather, when there is more need for high protein food, such as corn. Bird diversity would not be as good due to the lack of diverse habitats

4.2.3 Listed Species

There have been no listed plants or animals identified on the proposed wetland site. Section 7 consultation with the U. S. Fish and Wildlife Service was performed (See attachments).

4.2.4 Cultural Resources

No cultural resources are known or have been found on the proposed construction site.

4.2.5 Environmental Justice

See Section 1.1.1

4.2.6 Cumulative Impacts

Wetland resting, feeding and nesting habitat has been significantly reduced or degraded along the Illinois River corridor. Although it does create feeding habitat, alternative B does nothing to reverse the lose in wetlands and create a diverse mosaic of wetland habitats such as was found

historically.

4.3 Alternative C

Under this alternative, the refuge would not take any management action to restore prior existing habitats such as marsh or wetlands. The area would be left on its own to naturally regenerate which would consist of cottonwoods, silver maples and willows. Moist soil management would not be possible and the area would be lost as waterfowl and shorebird habitat. If this alternative were selected, the refuge would stop all management activities. The area would be allowed to revert back to bottomland trees.

4.3.1 Habitat Impacts

Under this alternative, the area would quickly be invaded by cottonwoods, willows and silver maples.

4.3.2 Biological Impacts

Cover habitat for some migratory birds would be provided in the form of cottonwoods and silver maples. Bird diversity would not be as good due to the lack of diverse habitats

4.3.3 Listed Species

There have been no listed plants or animals identified on the proposed wetland site. Section 7 consultation with the U. S. Fish and Wildlife Service was performed (See attachments).

4.3.4 Cultural Resources

No cultural resources are known or have been found on the proposed construction site.

4.3.5 Environmental Justice

See Section 1.1.1

4.3.6 Cumulative Impacts

Alternative C does not provide the needed wetland habitat which has been lost along the Illinois River. Eventually, it will provide bottomland forest habitat but not the needed shallow flooded wetland habitat.

4.4 Summary of Environmental Consequences by Alternative

	Alternative A	Alternative B (No Action)	Alternative C
Resting, feeding, and nesting habitat for migratory birds	High	Low	Moderate
Natural Biological Diversity	High	Low	Low
Protect endangered and threatened species	High	Low	Moderate
Increase public use opportunities for recreation and education	High	Low	Moderate
Potential for effecting adjacent landowners	Low	Low	Low

Chapter V List of Preparers

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Chapter VI Consultation and Coordination With the Public and Others

<u>Agencies</u>	<u>Consultation</u>	<u>Permit received for Construction of Alternative A</u>
John Dobrovolny Regional Historic Preservation Officer	Ensure that archeology and historic resources are in compliance with federal laws	
Illinois Department of Natural Resources Office of Water Resources	Copies of 404 permit application sent to them, notifying them of planned work and permit needed.	

<u>Agencies</u>	<u>Consultation</u>	<u>Permit received for Construction of Alternative A</u>
Illinois EPA	Copies of 404 permit application sent to them, notifying them of planned work.	
US Fish and Wildlife Service	Section 7 Consultation Prepared and submitted	
US Army, Corps of Engineers Rock Island District Permit section	Copies of 404 permit application sent to them, notifying them of planned work and permits needed	
Public	Will notify by posting on refuge bulletin boards, local newspapers, notice in local paper, refuge office and the local post offices	

VII. Public Comment on DRAFT EA and Response

No comments received as of 2/27/03

VIII. References cited:

None